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AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

LISTING OF CLAIMS

1.   (Currently amended) A method for determining the distance of a transceiver located within a lumen from the center of the lumen and for determining the radius of the lumen, the lumen cross-section being substantially circular at the transceiver location, the method applied on data received from a transceiver placed at a position within the lumen that is distance (r) from the center and distance (a) from the lumen wall, the method comprising:

transmitting a signal of known velocity (v); that can be correlated with the time-of-flight and

receiving two echo signals, the [[a]] first signal related to a near section of the lumen and the [[a]] second signal related to an outermost section of the lumen; that are reflections of the transmitted signal;

timing [[the]] a first time differences difference between the transmission time of the transmitted signal and reception time of the first echo signal (t1) and a second time difference between the transmission time of the transmitted signal and the reception time of the second echo signal (t2); reflection signals, the method comprising:

calculating the distance of the transceiver from the center of the lumen r using the equation r= (t1-t2)v/4; and

calculating the radius of the lumen R using the equation R= (t1+t2)v/4.

2.   (New) A method for determining the radius of a lumen, the lumen cross-section being substantially circular at the transceiver location, the method applied on data received from a transceiver placed at a position within the lumen, the method comprising:

transmitting a signal of known velocity (v);

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receiving a secondary echo signal elated to the signal traversing twice the diameter of the lumen;

timing a time difference between the transmission time of the transmitted signal and reception time of the secondary echo signal (t3)

calculating the radius of the lumen using the equation $R = (t3)v/4$.